

# Basic Elements of a LTC Infection Control Program



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# Today's Topics

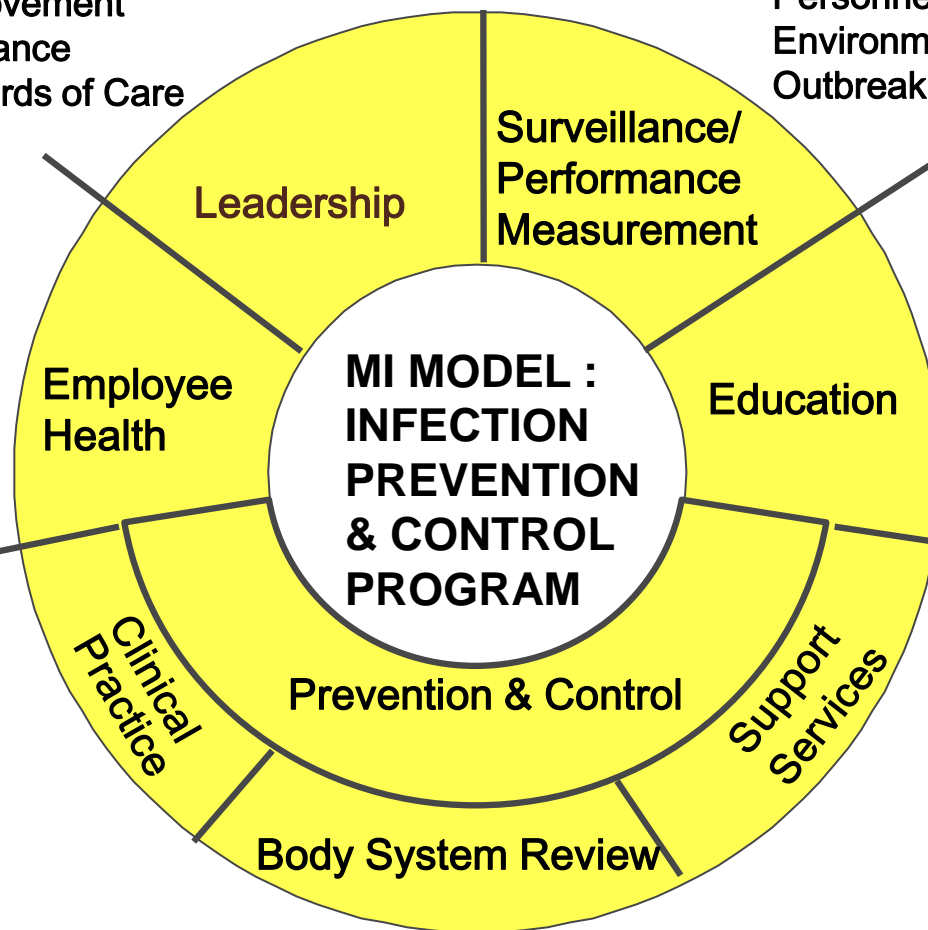
- Basic Elements of an Infection Control Program
- Long Term Care: F441 “the facility must establish and maintain an infection control program designed to provide a safe, sanitary and comfortable environment and to help prevent the development and transmission of disease and infection”
- Surveillance
- TB Control Programs
- Transmission-based Precautions
- Antibiotic Resistant Organisms
- New Updated Resources
- Disaster Preparedness
- Survey techniques

Philosophy-Authority-Responsibility  
 Patient & Personnel Safety Culture  
 Oversight: Function and Committees  
 Performance Improvement  
 Regulatory Compliance  
 Community Standards of Care

Scope: processes & outcomes  
 Patient: Community & Healthcare-  
 Associated Infection  
 Personnel: Health & Injury Prevention  
 Environment of Care (EOC)  
 Outbreak and Sentinel Events

Pre-placement  
 evaluation  
 Routine screening  
 Work restrictions  
 Occupational  
 exposure  
 management  
 Personal hygiene

Antimicrobial use  
 Asepsis  
 Patient Care Plan  
 Continuum of care  
 Hand Hygiene  
 Immunization  
 Isolation Precautions



New Hire Orientation  
 All Employees  
 Staff Specific  
 Ongoing  
 Regulatory Mandate  
 Task-specific  
 Facility-determined

Dental Service  
 Dietary Services  
 Equipment: Cleaning  
 Disinfection/Sterilization  
 Environmental Cleaning &  
 Pest Management  
 Emergency preparedness  
 Facility operations; air, water  
 construction/renovation  
 Laboratory/Pathology  
 Linen/Laundry  
 Personal care services  
 Rehabilitation Services  
 Service animals; Pet therapy  
 Waste management

Blood Stream; Eyes, Ears & Throat;  
 Gastrointestinal & Genitourinary Tract  
 Skin; Respiratory Tract;  
 Central Nervous System



# Basic Elements of an Infection Control Program

- Leadership
  - Philosophy
  - Authority
  - Responsibility
  - Over-site: Function and Committee
  - Performance Improvement
  - Regulatory Compliance/Community Standards of Care



# Basic Elements of an Infection Control Program

- Surveillance
  - Scope
  - Patient care processes
  - Patient outcomes
  - Employee
  - Outbreak/Sentinel Event Management
  - Environment/Physical Plant

# Basic Elements of an Infection Control Program

- Prevention and Control – Clinical
  - Antimicrobial usage
  - Aseptic technique
  - Patient assessment and Care Plan
  - Continuum of care
  - Hand washing
  - Immunization
  - Standard Precautions and Isolation Precautions

# Basic Elements of an Infection Control Program

- Prevention and Control – Body System
  - Bloodstream
    - Site and technique of insertion
    - Type of catheter material used
    - Hand hygiene and aseptic technique
    - Skin antisepsis
    - Catheter site care
    - Catheter securement
    - Use of antimicrobial/antiseptic

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - GU
    - Continence and incontinence management
    - Urinary catheter management-restrict use
    - Cleaning and disinfection of vaginal speculums

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - Skin
    - Skin integrity assessment
    - Pressure ulcer prevention and management
    - Management of artificial openings
    - Pediculosis (Lice) identification treatment and control
    - Scabies identification treatment and control
    - BED BUGS
    - Management of herpes infections, cellulitis, and burns
    - Hair removal
    - Body piercing and tattoos

# Basic Elements of an Infection Control Program

- **Respiratory**

- Inhalation therapy

- IPPB

- C-Pap

- Bi-Pap

- Oxygen administration

- Medication administration

- Suctioning

- Tracheostomy care

- Ventilators

- Use and cleaning of respiratory equipment ( humidifiers, nebulizers, breathing circuits, peak flow meters, suction equipment

- TB Skin test

- Swallow evaluation

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - GI
    - Nutrition and hydration
    - Enteral feedings
    - Bowel management
    - Management and treatment of patients with diarrhea and or emesis
    - Management of patients with *Clostridium difficile*
    - Cleaning and disinfection of endoscopes

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - Ears, Eyes, Nose, Mouth and Throat
    - Oral hygiene
    - Ocular hygiene
    - Ear hygiene
    - Speculum cleaning and disinfection
    - Hearing aide cleaning and maintenance

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - CNS
    - Spinal Tap
    - Management and treatment of a patient with known or suspected bacterial meningitis
    - Management of patient with prion disease

# Basic Elements of an Infection Control Program

- Prevention and Control - Body Systems
  - Reproductive
    - Conjugal visitation
    - Speculum cleaning and disinfection
    - Screening for sexually transmitted diseases

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Dental Services
    - Disinfection and sterilization

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Sterilization, Disinfection and Cleaning
    - Whirlpools bathing unit
    - Thermometers
    - Reusable instruments/equipment
    - Reuse and reprocessing of items labeled for single-use
    - Storage of clean and sterile items
    - Use and monitoring of sterile processing
    - Use and monitoring of
      - High-level disinfection
      - pasteurization

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Beauty and barber shop, hair, and nails
    - Cleaning and disinfection of combs
    - Brushes, razors, etc
    - Linen management
    - Nail care

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Linen/Laundry
    - Clean and soiled linen management for facility and personal
      - Handling
      - Storage
      - Transport
      - Soiled linen processing
      - If vendor used; monitor

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Laboratory/Pathology Services
    - Specimen collection, storage and transport
    - Reporting of abnormal results
    - Reporting of antimicrobial sensitivity
    - Antibiograms
    - Use of waived testing
    - Quality controls for testing

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Pest Management
    - Evidence of an integrated pest management plan
  - Construction and renovation
    - Infection control approval
    - Barrier/site evaluation

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Animals, birds, fish and plants
    - Screening for health/temperament
    - Screening residents for allergies and compatibility
    - Caring for pets while in facility, (contracted? include protocols)
    - Bite protocol, domestic and wild

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Podiatry
    - Cleaning and disinfection of equipment
  - Radiology
    - Cleaning and disinfection of equipment
  - Rehab services: occupational, physical and speech
    - Cleaning and disinfection of equipment and whirlpools
    - Wound management: debridement and wound care

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Waste management
    - Medical waste management plan
      - Waste separation
      - Waste handling and transport
      - Waste disposal
      - Documentation

# Basic Elements of an Infection Control Program

- Prevention and Control – Support Services
  - Water supply
    - Have a Disaster Plan for emergency water supply
  - Disaster planning
    - Evacuation
    - Stockpile monitoring
    - Alternate plans for hemodialysis

# Basic Elements of an Infection Control Program

- Employee Health- inclusive of full-time, part-time, contingent/contracted employees, students and volunteers
  - Bloodborne pathogens program
  - Job descriptions include:
    - Job essential job function
    - Job-specific hazard exposure assessment
    - Personal Protective Equipment requirement
  - Policies for contracted employees and students to delineate facility responsibility

# Basic Elements of an Infection Control Program

- Employee Health-
  - Baseline health assessment
  - Immunization for or documentation of immunity for measles, mumps, rubella, chickenpox, tetanus, hepatitis
  - Influenza vaccination program
  - Screening for latent TB, Mantoux method of TB skin testing using PPD
    - two step method vs. quantiferon serology test
    - TST among BCG recipients

# Basic Elements of an Infection Control Program

- Employee Health-
  - Annual/periodic Screening
    - Health assessment
    - Immunizations
    - TB evaluation (TST, questionnaire)

# Basic Elements of an Infection Control Program

- Employee Health-
  - Work restrictions
    - Work restrictions related to communicable disease
    - Work-related exposure and return to work policies

# Basic Elements of an Infection Control Program

- Employee Health-
  - Post-exposure Management
    - Identification, reporting, evaluation, and management of an exposure ( BBP,TB, meningitis, scabies)
    - Treatment, consents and processes

# Basic Elements of an Infection Control Program

- Employee Health
  - Personal hygiene
    - Dress code
    - Personal hygiene
    - Hand hygiene
      - Artificial nails

# Basic Elements of an Infection Control Program

- Education
  - Employee upon hire
    - Hand hygiene
    - Dress code, personal hygiene
    - Standard/Isolation precautions
    - Immunizations
    - Illness reporting/work restriction
    - Exposure control plans
    - Bloodborne infectious diseases
    - Tuberculosis control plan
    - Aseptic technique

# Basic Elements of an Infection Control Program

- Education
  - Employee (ongoing, annual, periodic)
    - Change in regulatory standard
    - Change in policy
    - Non-compliance
  - Patient, families, and visitors
    - Hand hygiene
    - Infection prevention
    - Isolation procedures
    - Procedure specific
    - Antimicrobial resistance reduction

# Surveillance

- Methods- Standardized, Definitions, Denominators
  - Whole-house limitations
  - Targeted, point prevalence
  - Device related
  - Combination
  - Based on high risk, high volume problem areas

# Surveillance

- Purpose
  - Improve quality and outcome of healthcare
  - Promote public health
  - Benchmarking
    - NHSN- [www.cdc.gov/ncidod/hip](http://www.cdc.gov/ncidod/hip)
    - NNIS
    - NaSH
    - DSN

# Surveillance

- Data Collection
  - What
    - System
    - Process
    - Outcome
  - Identify sources
    - Lab reports
    - Unit reports
    - Pharmacy
    - observational

# Surveillance

- Analysis
- *Document*
- Reports
  - Infection Control Committee
  - Quality Committee
  - Administrator
  - Medical Director
  - Director of Nursing
  - Unit
  - Front line personnel
  - Physicians

# Surveillance

- Intervention of risk-reduction measure
  - Documented
- Evaluate effectiveness of intervention
- Measure progress toward program goals
- See Websites: Healthcare Associated Infection Prevention
  - <http://www.cdc.gov/HAI/stateplans/state-hai-plans/mi.html> (Michigan)
  - <http://www.cdc.gov/hai/> (national)
  - [www.cdc.gov/hicpac](http://www.cdc.gov/hicpac)

# TB Control Program

- Oversight of the Program is assigned and reviewed at periodic (annual) intervals
  - Surveillance
  - Containment
  - Assessment
  - Education

# TB Control Program

- Surveillance
  - Diagnosis
  - Case Reporting
  - TB and HIV

# TB Control Program

- Containment
  - Early recognition
  - Isolation or transfer
  - Treatment of TB Disease
  - Investigation of contacts
  - Treatment of Latent TB Infection

# TB Control Program

- Assessment
  - % of staff and residents with positive TST
  - % of tested with conversion from Neg. to Pos.
  - TB Risk assessment  
[http://www.michigan.gov/documents/mdch/Guidelines-  
\\_Preventing\\_Transmission\\_2005\\_358921\\_7.p  
df](http://www.michigan.gov/documents/mdch/Guidelines-Preventing_Transmission_2005_358921_7.pdf)
  - TB Education and management  
[http://www.cdc.gov/tb/education/corecurr/ind  
ex.htm](http://www.cdc.gov/tb/education/corecurr/index.htm)

# TB Control Program

- Education

- Administrative Controls

- Policies for early recognition, isolation and treatment
    - Two-step TST for patients
    - Two-step TST for health care worker
    - Interferon-gamma release (blood) assay- TB blood test (single test)

- Engineering Controls

- Negative pressure rooms with 6-12 ACH
    - Tested monthly/daily when in use

# TB Control Program

- Education
  - Respiratory Protection
    - N-95 or PAPR- (powered air purifying respirator)
    - When to use
    - How to apply
    - Fit check
    - Fit test and medical evaluation
  - MIOSHA (Licensing and Regulatory Affairs)

[http://www.michigan.gov/documents/CIS\\_WSH\\_part451\\_54075\\_7.pdf](http://www.michigan.gov/documents/CIS_WSH_part451_54075_7.pdf)

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**“The patient in the next bed is highly infectious. Thank God for these curtains.”**

# Infection Control Precautions

<http://www.cdc.gov/hicpac/>

- Hand Hygiene
  - Written policy
  - Hand washing facilities, alcohol-based hand sanitizer available
  - When to use each
    - Hand washing
      - Anytime hands are **visibly soiled**
      - After **toileting**

# Infection Control Precautions

- Hand Hygiene
  - Hand washing continued...
    - After contact with body fluids, mucous membranes, and non-intact skin or dressing, provided hands are not visibly soiled
    - Before and after contact with **food**, products for food preparation and before eating
    - Following any contact with **pets** during animal assisted therapy or visitation and after contact with any pet care item
  - Hand sanitizer
    - Before any direct patient contact
    - After contact with resident's skin
    - After contact with inanimate objects in the care environment

# Infection Control Precautions

- Hand Hygiene
  - Discourage use of artificial nails
  - Educate patient family and volunteers
  - Observe compliance/document/report

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system

## Standard Precautions

- applies to all patients with or without recognized infectious agents
- assumes infectious agents are present in all non intact skin mucous membranes, blood, and body fluids (except sweat)
- therefore hand hygiene and use of personal protective equipment should be used consistently if contact with those fluids are likely

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Standard Precautions continued...
    - PPE- gloves, gowns, mask, resuscitation device and eye/face protection
      - Selection
      - Availability
    - Respiratory Hygiene/Cough Etiquette
      - Source containment of respiratory tract pathogens ( i.e. SARS, influenza, avian influenza)
      - Cover your cough with a tissue or use a regular surgical mask

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Isolation Precautions- to be used **in addition** to standard precautions (expanded? Precautions)
    - Are based on the mode of transmission of the specific pathogen
    - Apply to epidemiologic important agents or highly transmissible agents

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Isolation Precautions-
    - Contact
      - Private room or cohort
      - Gown and gloves
      - Masking if patient is coughing

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Isolation Precautions-
    - Droplet
      - Surgical mask if within 3 feet
      - Gown if splashing or spraying
    - Protective
      - Positive pressure
      - Complete PPE

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Isolation Precautions-
    - Airborne
      - Private room
      - Negative pressure
      - 6-12 air changes per hour
      - Door closed
      - Apply N-95 before entering

# Infection Control Precautions

- Standard/Isolation Precautions- a two-tiered system
  - Isolation Precautions-
    - Helpful additions
      - Alternative methods
      - Discontinuing
      - Surveillance/detection
      - Monitoring adherence
      - Rapid recognition

# MDRO Multi-drug Resistant Organisms

## Prevention and Control

- Multiple Guidelines
  - SHEA
  - CDC
  - MSIPC
- Minimum requirements
  - Administrative
  - Education
  - Judicious antimicrobial use
  - Surveillance
  - Prevent transmission- infection control precautions
  - Environmental measures

# MDRO Multi-drug Resistant Organisms

## Prevention and Control

- Surveillance
  - Establish a laboratory based system to detect and communicate evidence of MDROs in clinical isolates
  - Prepare and monitor antimicrobial susceptibility reports and provide physicians with summary reports. If labs are outsourced, request local or regional aggregated susceptibility trends
  - Notify infection control of novel resistance patterns, i.e. VISA, VRSA
  - Identify specific MDROs for systematic monitoring, i.e. MRSA, VRE, CRE & C. Diff
  - Determine prevalence and define frequency of MDRO that would trigger intensive MDRO control measures

# Updated Resources

- Michigan Bed Bug Manual  
<http://www.michigan.gov/emergingdiseases/0,1607,7-186--147759--,00.html>
- Head Lice Manual –  
[www.michigan.gov/documents/Final\\_Michigan\\_Head\\_Lice\\_Manual\\_103750.7.pdf](http://www.michigan.gov/documents/Final_Michigan_Head_Lice_Manual_103750.7.pdf)
- Scabies Manual –  
[www.michigan.gov/documents/BHS\\_NHM\\_Michigan\\_Scabies\\_Prevention\\_and\\_Control\\_Manual\\_131983\\_7.pdf](http://www.michigan.gov/documents/BHS_NHM_Michigan_Scabies_Prevention_and_Control_Manual_131983_7.pdf)

# Updated Resources

- Norovirus cleaning guidelines –  
[http://www.michigan.gov/documents/mdch/NorovirusEnvironCleaning\\_281018\\_7.pdf](http://www.michigan.gov/documents/mdch/NorovirusEnvironCleaning_281018_7.pdf)
- Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health Care Settings, 2005 CDC Guideline for Isolation Precautions- Preventing Transmission of Infectious Agents in a Health-Care Setting, 2004 Revision  
<http://www.cdc.gov/tb/publications/guidelines/default.htm>

# Disaster Preparedness

- Plan
  - SURVEILLANCE
  - RESPONSE
  - COMMUNICATIONS
  - SECURITY
  - EDUCATION
- Local/regional planning meetings
- Participate in community and regional disaster drills
- Long Term Care Disaster Planning Resources
  - [http://www.michigan.gov/mdch/0,1607,7-132-54783\\_54826\\_56166\\_56167---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-54783_54826_56166_56167---,00.html)  
<http://go.usa.gov/aOm>
  - Emergency Preparedness Checklist, Centers for Medicare & Medicaid Services (CMS)  
[https://www.cms.gov/surveycertemergprep/download/s/s&c\\_epchecklist\\_provider.pdf](https://www.cms.gov/surveycertemergprep/download/s/s&c_epchecklist_provider.pdf)
  - Michigan Department of Community Health, Office of Public Health Preparedness [www.michigan.gov/ophp](http://www.michigan.gov/ophp)

# Regional Healthcare Coalitions

## Region 1

5020 Northwind Drive, Ste. 104  
East Lansing MI 48823  
Office: 517-324-4404  
Fax: 517-324-4406  
<http://www.d1rmrc.org>

## Region 2N

1000 W. University Drive  
Rochester MI 48307  
Office: 248-759-4748  
Fax: 248-759-4751  
<http://www.region2north.com>

## Region 2S

6754 Brandt Street  
Romulus MI 48174  
Office: 734-728-7674  
Fax: 734-902-6000  
<http://www.2south.org>

## Region 3

1600 N. Michigan Avenue  
Rm. 411  
Saginaw MI 48602  
Office: 989-758-3712  
Fax: 989-758-3714  
<http://www.region3hpn.org>

## Region 5

1000 Oakland Drive  
Kalamazoo MI 49008  
Office: 269-337-4263  
Fax: 269-337-6476  
<http://www.5drmc.org>

## Region 6

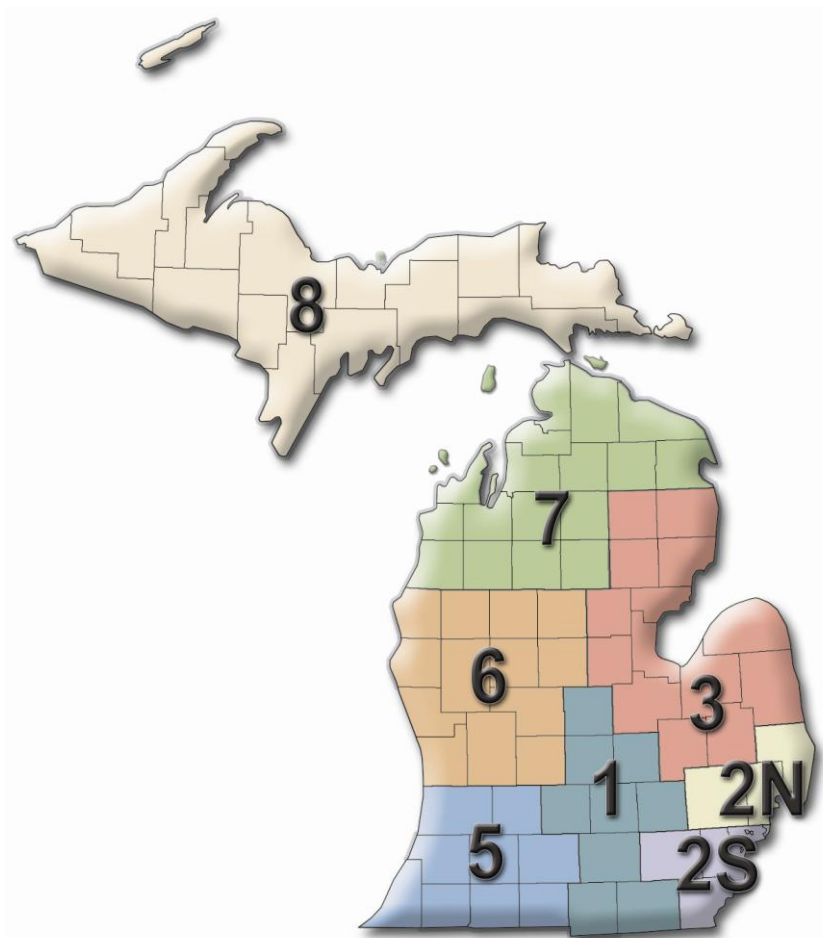
1675 Leahy Street, Ste. 308B  
Muskegon MI 49442  
Office: 231-728-1967  
Fax: 231-728-1644  
<http://www.miregion6.org>

## Region 7

2464 Silver Fox Trail, Ste. A  
Gaylord MI 49735  
Office: 989-731-4975  
Fax: 989-732-6793  
<http://www.portal.miregion7.org>

## Region 8

420 W. Magnetic Street  
Marquette MI 49855  
Office: 906-225-7415  
Fax: 906-225-3038  
<http://www.reg8.org>



# Survey Strategies

## 1. Observations

- Patient care, medication administration dressing change, room cleaning

## 2. Interview

- IP, staff patients

## 3. Policy review

- Evidence based

## 4. Data

- Benchmarks
- Posted

# In Conclusion...



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